

CLAIMS

1. The composite, wall-panel (1) **characterized** in that comprises the two distinctly wide and thin concrete layers (2) and (3), both reinforced substantially with two
5 steel wire mesh layers (5), being interconnected continuously throughout entire length of the panel by at least two thin steel strip webs (4) so that the wide gap is formed between them filled partially by thermo-insulation (10) inwardly adhered to inner concrete layer with the rest of the space (11) used as an air ventilation whereby the strip-webs (4) are anchored to both concrete layers through plurality
10 of welded along their edges arranged steel loops (7) containing holes (9) into which short steel rod anchors (8) are inserted keeping the distance between mesh layers, through which additional longitudinal reinforcing bars (6) or prestressing strands are conducted.

2. The composite, wall-panel as claimed in claim 1, **characterized** in comprising
15 special supports for bearing roof flat-soffit units (13), with inbuilt steel tube (14) protruding slightly over both, enlarged near supports concrete layers (2) and (3), to which the tube (14) is anchored, being also welded perpendicularly to steel webs (4), transmitting in that way gradually roof load from steel tube (14) to both concrete layers (2) and (3) centrically, without considerable stress concentration,
20 whereby the connection is easy carried-out by means of two bolts (50) extended upwardly from the top surface of the tube (14) upon which the soffit plate of the roof-ceiling unit (13) was slipped over through two holes (49) and fixed by nuts.

3. The composite, wall-panel as claimed in claim 1, **characterized** in comprising special supports for bearing floor units (29) inside of horizontal groove (38) formed
25 along an interrupt of the inner concrete layer which strips the inbuilt steel tube (14) anchored to both concrete layers with steel webs (4) passing right-angulary to the tube (14), continuously through the groove (38), whereby the rigid floor unit (29) to wall panel (1) connection is achieved by connecting overlapped webs (4) of the wall panel with stripped webs (32) of floor unit by bolts and nuts (40) inside of the
30 groove (38) after which the groove is poured by concrete, whereby the lower concrete layer (31) of the floor unit was previously leaned against the tube (14) with webs (4) of the wall panel slipped into slots (39) near webs (4) so that after the connection is done a perfect straight connecting edge on both upper and lower sides along the joint is obtained, requiring no further treatment.

4. The building construction of composite load-bearing vertical wall-panels (1) and composite roof-ceiling units (13) which may comprise few floor units (29), **characterized** in that wall-panels (1) aligned and rigidly fixed as cantilevers to strip
- 5 precast foundations (18) with longitudinal sockets (22) arranged along the perimeter of the building, whereby the widths of wall-panels (1) exactly coinciding with widths of floor-ceiling and floors units (29) ensure in that way precise coincidence of connecting details, so that the building with all flat inner surfaces, comprising no either columns nor beams is achieved.
- 10 5. The lateral bracing mechanism principle for the self-stable buildings constructed of composite load-bearing vertical wall-panels (1) and composite floor-ceiling (13) and roof units (29) as claimed in clime 4, **characterized** in that wall-panels (1) mounted and rigidly fixed temporarily as cantilevers after being attached with their tops to the stiff horizontal plane (51) formed of all applied roof-ceiling plates (13)
- 15 interconnected along their adjacent edges by details (54), became laterally restrained against sideway with their buckling length significantly reduced, by joining the ending plates of roof units along their contacts to gable wall panels bracing in that way the whole structure and ensuring its lateral stability.